

REMARKS/ARGUMENTS

In the Office Action mailed September 12, 2008, claims 1-7 were rejected. In response, Applicants hereby request reconsideration of the application in view of the proposed amendments and the below-provided remarks. No claims are added or canceled. Applicants submit that the proposed amendments place the present application in condition for allowance or in better condition for appeal.

For reference, proposed amendments are presented for claims 1 and 7. In particular, the proposed amendment for claim 1 recites an electrically insulating material and a cover layer formed entirely by the dielectric layer. The proposed amendment for claim 7 fixes a minor grammatical omission and recites depositing a dielectric layer of a dielectric material directly on a first electrically conductive layer.

References to Dictionary Definitions

Applicants notes that the Office Action refers to certain dictionary definitions within the body of the Office Action. While the Office Action may refer to dictionary definitions for a contextual understanding of the art, generally, it should be understood that the use of certain dictionary definitions in the Office Action remarks does not define the scope of the claims. Rather, the language of the claims themselves set out the scope of the claims. Thus, the claim language should be viewed in light of the exact language of the claim, instead of any particular dictionary definitions referenced in the Office Action.

Claim Rejections under 35 U.S.C. 102 and 103

Claims 1, 2, 4, and 6 were rejected under 35 U.S.C. 102(b) as being anticipated by Momodomi et al. (U.S. Pat. No. 4,881,113, hereinafter Momodomi). Additionally, claim 7 was rejected under 35 U.S.C. 102(b) as being anticipated by El-Kareh et al. (U.S. Pat. No. 5,933,718, hereinafter El-Kareh.) Additionally, claim 3 was rejected under 35 U.S.C. 103(a) as being unpatentable over Momodomi in view of Chen et al. (U.S. Pat. No. 5,656,534, hereinafter Chen). Additionally, claim 5 was rejected under 35 U.S.C. 103(a) as being unpatentable over Momodomi in view of Igel et al. (U.S. Pat. No.

6,204,549, hereinafter Igel). However, Applicants respectfully submit that these claims are patentable over Momodomi, El-Karch, Chen, and Igel for the reasons provided below.

Independent Claim 1

Claim 1, as amended, recites “an insulating layer of an electrically insulating material” (emphasis added). Additionally, claim 1 recites “wherein the toroid of the toroidal spark gap cavity comprises a base layer formed by the insulating layer of the integrated circuit chip” (emphasis added) and “a cover layer formed entirely by the dielectric layer of the integrated circuit chip, and the center of the toroid being formed by the center electrode comprising a contact pad in contact with the insulating layer” (emphasis added).

Momodomi does not disclose a base layer formed by an insulating layer

Momodomi does not disclose a base layer formed by an insulating layer of an electrically insulating material. Momodomi merely discloses a n^+ -type region 13 that acts as a resistor of the protection device, as explained in Applicants’ previous response. As explained before, the n^+ -type region 13 is not an insulator, but an n-doped n-type semiconductor. The Office Action asserts that a semiconductor in certain low-temperature circumstances may develop insulating properties. Applicants submit that the n^+ -type region 13 of Momodomi is disclosed as a semiconductor, that Momodomi describes the n^+ -type region 13 as nothing other than a semiconductor, that Momodomi is silent with regard to temperature much less low-temperature, and that Momodomi does not describe the semiconductor n^+ -type region 13 as being capable of acting as an insulator. Hence, the n^+ -type region 13 does not disclose a base layer of a spark gap cavity formed by an insulating layer of the integrated circuit chip because the n^+ -type region 13 is not an insulator. Therefore, Momodomi fails to disclose a base layer of a spark gap cavity formed by the insulating layer of the integrated circuit chip.

Momodomi does not disclose a cover layer formed entirely by a dielectric layer of an integrated circuit chip

Momodomi does not disclose a cover layer formed entirely by a dielectric layer of an integrated circuit chip. Momodomi merely discloses a protrusion of the silicon dioxide layer 20 between the electrodes 17 and 18. In other words, the purported cavity of Momodomi is covered not only by the silicon dioxide layer 20 but is also covered by the electrodes 17 and 18 as well. Since the purported cavity of Momodomi is not entirely covered by the silicon dioxide layer 20, but instead is additionally covered by two separate electrodes, Momodomi does not disclose a cover layer formed entirely by a dielectric layer of an integrated circuit chip. Therefore, Momodomi fails to disclose a cover layer formed by a dielectric layer of an integrated circuit chip.

For the reasons presented above, Momodomi does not disclose all of the limitations of the claim because Momodomi does not disclose a base layer formed by the insulating layer of the integrated circuit chip or a cover layer formed by the dielectric layer of the integrated circuit chip, as recited in the claim. Accordingly, Applicants respectfully assert claim 1 is not anticipated by Momodomi because Momodomi does not disclose all of the limitations of the claim.

Independent Claim 7

Claim 7, as amended, recites “depositing a dielectric layer of a dielectric material directly on said first electrically conductive layer” (emphasis added).

In contrast to the limitations of the claim recited above, El-Kareh does not disclose depositing a dielectric layer of a dielectric material directly on the first electrically conductive layer. Although El-Kareh describes a polysilicon layer 152 and a silicon nitride layer 156, El-Kareh nonetheless fails to disclose depositing the silicon nitride layer 156 directly on the polysilicon layer 152. Instead, El-Kareh discloses depositing the silicon nitride layer 156 on a layer of silicide 154. El-Kareh, col. 1, lines 54-62, and Fig. 1A. Therefore, El-Kareh does not disclose depositing a first electrically conductive layer of a first electrically conductive material on an insulating layer and depositing a dielectric layer of a dielectric material on the first electrically conductive layer, as recited in the claim.

For the reasons presented above, El-Kareh does not disclose all of the limitations of the claim because El-Kareh does not disclose depositing a first electrically conductive layer of a first electrically conductive material on an insulating layer and depositing a dielectric layer of a dielectric material directly on the first electrically conductive layer. Accordingly, Applicants respectfully assert claim 7 is not anticipated by El-Kareh because El-Kareh does not disclose all of the limitations of the claim.

Dependent Claims

Claims 2-6 depend from and incorporate all of the limitations of independent claim 1. Applicants respectfully assert claims 2-6 are allowable based on an allowable base claim. Additionally, each of claims 2-6 may be allowable for further reasons.

CONCLUSION

Applicants respectfully request reconsideration of the claims in view of the proposed amendments and remarks made herein. A notice of allowance is earnestly solicited.

Respectfully submitted,

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